

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/705,777

Filing Date: November 10, 2003

Title: SYSTEM AND METHOD FOR RACK MOUNT SYSTEM MID-PLANE INTERCONNECT USING SWITCHED TECHNOLOGY

Assignee: Intel Corporation

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Dkt: P9067D (INTEL)

**IN THE SPECIFICATION**

Please amend the specification as follows:

Please replace the paragraph [0014] beginning on page 4, line 3 with the following amended paragraph:

Figs. 1a-1b show a first embodiment of a rack mount system according to the present invention.

Please replace the paragraph [0015] beginning on page 4, line 6 with the following amended paragraph:

Figs. 2a-2b show a second embodiment of the rack mount system according to the present invention.

Please replace the paragraph [0033] beginning on page 7, line 25 with the following amended paragraph:

Figs. 1a-1b show a first embodiment of a rack mount system 100 according to the present invention. According to this embodiment, rack mount system 100 is used to, among other functions, house and provide power to one or more add-in cards that allow, for example, the switching of multiple telephone calls. Rack mount system 100 includes a main card slot 113, a mid-plane 110, and a transition card slot 125. Add-in cards can be inserted from both the front and back of rack mount system 100. From the front, add-in cards are inserted into main card slot 113 of rack mount system 100. The add-in cards inserted from the front include one or more main cards 119 and switch card 116a. In this embodiment, main card slot 113 has a height D of 9.19 inches, a width C of 17.00 inches, and a depth B of 6.30 inches. From the back, add-in cards are inserted into transition card slot 125 of rack mount system 100. From the back, the add-in cards inserted are one or more transition cards 122. In this embodiment, transition card slot 125 has a depth A of 3.15 inches, a width C of 17.00 inches, and a height D of 9.19 inches. Mid-plane 110 connects main card slot 113 and transition card slot 125.

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Please replace the paragraph [0041] beginning on page 11, line 3 with the following amended paragraph:

Figs. 2a-b show a second embodiment of rack mount system 100 according to the present invention. In the second embodiment, rack mount system 100 includes two switch cards, i.e., the two switch cards 116b, rather than a single switch card as in the first embodiment. Here, whenever information is routed from one of the main cards to another one of the main cards, two sets of that information is routed, one set of information is routed to one of the switch cards 116b and the other set of information, that is a duplicate of the first set of information, is routed to the other switch card 116b. Therefore, the particular one of the main cards transmitting the information sends two identical sets of information, one set of information to each of the switch cards 116b. As will be explained in greater detail below, information is transferred between main cards 119 and switch cards 116b via dedicated point-to-point differential copper pairs. Each of the main cards connects to both of the switch cards 116b, and each of these connections uses two differential copper pairs—one for transmitting the information and another for receiving the information.

Please replace the paragraph [0065] beginning on page 21, line 2 with the following amended paragraph:

FIG. 11 shows an embodiment of a differential copper pair used to implement the switched Ethernet interconnect within mid-plane 110 (Fig. 1) according to the present invention. In this embodiment, the differential copper pairs are integrated within the mid-plane 110 (Fig. 1) and used to transfer information between main cards 119 (Fig. 1) and the switch cards. Here, the conductors and insulators in the differential copper pair are spaced at certain distances and certain material is used to attain a fixed impedance so that information can be transferred on the differential copper pairs at rates of, for example, 10 Gbit/s. The differential copper pair integrated into mid-plane 110 (Fig. 1) includes a copper conductor 603a and a copper conductor 603b that are parallel to each other and spaced 5.0 millimeters apart. A left side ground plane 609 is used for grounding and is at least 0.015 inches thick and is parallel to both copper conductor 603a and copper

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conductor 603b. Left side ground plane 609 is 5.0 millimeters to the left of copper conductor 603a and 10.0 millimeters to the left of copper conductor 603b. A right side ground plane 612 used for grounding is at least 0.015 inches thick and is parallel to left side ground plane 609. Right side ground plane 612 is 5.0 millimeters to the right of copper conductor 603b and 10.0 millimeters to the right of copper conductor 603a and 15.0 millimeters to the right of left side ground plane 609.